

Sommaire du Programme

 VME BRAKE ENGINEERING
Suède

Freins à Disque Industriels

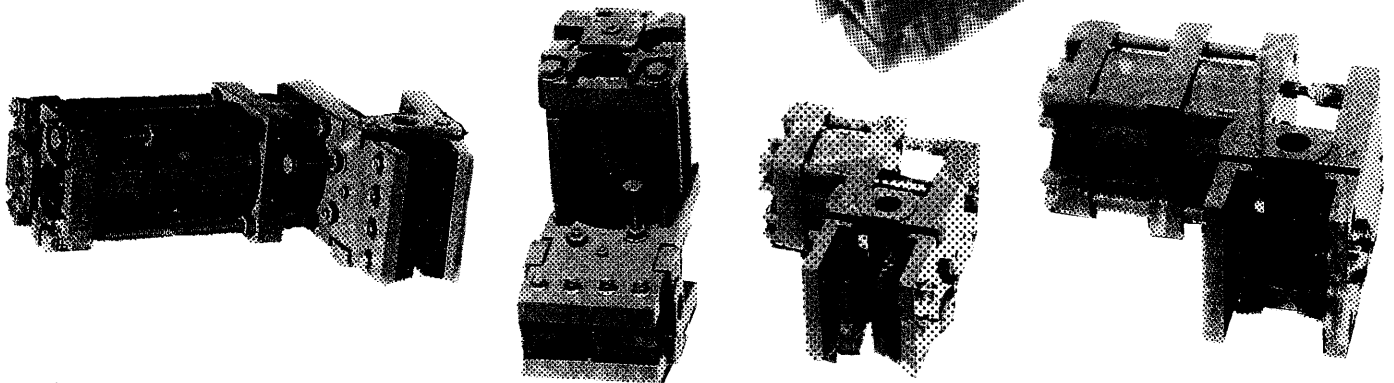
Pneumatiques
Hydrauliques
Par Ressort
Manuels

DOMAIN D'UTILISATION

Laminoir à froid, enrouleur/dérouleur
Machine pour le travail des toles
Machine de trefilerie, cablerie
Regulation de Tension: Feuillard d'acier,
fil métallique, câble, papier, feuille plastique
Sceries, machine à bois
Positionnement de table tournante
Moteur reducteurs freins
Frein à l'engrenage: Freinage de service
et de parking de véhicules forestier
Treuil à câble pour Navire Cabliers;
Regulation de tension et freinage de maintien
Frein sur rail: Freinage Linéaire et de
maintien pour appareils roulants sur rails
Bancs d'essais: Soupapes de sureté de
centrales nucléaires
Bancs d'essais: Analyse de performance
de boîte de vitesses pour véhicules lourds

TYPE S DES FREINS FABRIQUES

A commande pneumatique ou hydraulique
A commande par manque de pression/
Desserrage pneumatique ou hydraulique
A commande à la main/ Serrage par ressort
Executions spéciales



Rotary



Linear Motion Control

VME BRAKE ENGINEERING



depuis 1983

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Constructeur + Fabricant de
Freins à Disque pour des applications
industrielles dures aux machines
stationnaires et mobiles

CONTENTS

- Pneumatic*
- Spring Applied/Pneumatically Released*
- Combined Pneumatic/Spring Applied*
- Hydraulic*
- Spring Applied/Hydraulically Released*
- Combined Hydraulic/Spring Applied*
- Hand Operated/Spring Applied*
- Accessories*
- Application*

Product Range
VME Brakes
Brake KeyData & Application

		Brake Key Data			
Data sheet		Braking Force (N)	Braking Force (N)	Operating Pressure (bar)	Release/ (bar)
		Coefficient $\mu=0,4$	of friction $\mu=0,28$		Hold Off pressure
Pneumatic Disc Brakes					
LT 32	2-1078	340 N	240 N	5 bar	
LT 40	2-1078	535 N	375 N	5 bar	
LT 63	LT 63	1.950 N	1.365 N	5 bar	
LT 2x63	LT 63 ref.	3.900 N	2.730 N	5 bar	
LT 2x63 with separate inlets	LT 63 ref.	2x1950 N	2x1.365 N	5 bar	
LT 100	LT 100	5.850 N	4.100 N	5 bar	
LT 2x100	LT 2x100	11.700 N	8.200 N	5 bar	
LT 2x100 with separate inlets	2-5546	2x5.850 N	2x4.100 N	5 bar	
Pneumatic Spring applied FAILSAFE Brakes					
LTF 63	1-1109 ref.	1.160 N	810 N		3,9 bar
		1.620 N	1.130 N		5,2 bar
LTF 100	LTF 100	2.830 N	1.980 N		3,6 bar
LTF 2x100	LTF 2x100	5.590 N			3,1 bar
LTF 4x100	LTF 4x100	9.460 N			5,2 bar
Combined Pneumatic/Spring "TWOSTOPP" Brakes					
LTLF 63	1-1109 ref.	1.950 N	1.365 N	5 bar	
		1.620 N	1.130 N		5,2 bar
LTLF 100	2-5545	5.850 N	4.100 N	5 bar	
		3.620 N	2.520 N		3,6 bar
LTLF 2x100	2-5545	5.850 N	4.100 N	5 bar	
		5.590 N	3.910 N		6,2 bar
Hydraulic Disc Brakes					
LTH 25-63	2-1086	5.200 N	3.680 N	80 bar	
LTH 25-100	2-1087	11.680 N	8.160 N	160 bar	
HT 100	2-5471	62.800 N		100 bar	
HT 100 HD	2-5471	100.480 N		160 bar	
Hydraulic Spring applied FAILSAFE Brakes					
LTHF 63	1-1109 ref.	5.620 N	3.930 N		19,5 bar
		2.640 N	1.850 N		9,5 bar
LTHF 100	LTHF 100	9.180 N			10,5 bar
		5.750 N			6,3 bar
Combined Hydraulic/Spring "TWOSTOPP" Brakes					
LTHF25-HF63	1-1109 ref.	5.200 N	3.680 N	80 bar	
		5.620 N	3.930 N		19,5 bar
LTH25-HF100	1-1093 ref.	11.680 N	8.160 N	160 bar	
		9.180 N	6.430 N		10,5 bar
Handoperated Disc Brakes					
LTMF 18	2-1037	0-130 N	0-90 N	Spring force adjustable by hand knob	
LTMF 18 B	2-1081	0-640 N	0-450 N		
Accessories					
Lining wear/Engagement	2-5520	APPLICATION			
Disengagement switches		Calculation of Braking Torque $T_b(Nm)$ at Braking Force (N) and coefficient of friction $\mu=0,4$ or $\mu=0,28$			
Application, miscellaneous		$T_b(N) = \frac{F_b(N) \times \text{nom. Disc dia. (mm)} - 60 \text{ (mm)}}{2 \times 1000} \times \mu$ * LT63 brakes series 54 (mm)			
General Brake Data		OPERATION			
Materials and Service Data		* Above data for Braking Force, Operating and Hold-Off Pressure are nominal			
Brake installations	1-5540	* Max. Service Pressure 10 bar for all Air Brakes, except caliper LT2x100 max. 2 x 7 bar			
Brake Test benches	1-5541	* Adjustment-free brake spring, except for hand operated spring applied calipers			
Transmission shaft brake	3-5522	* All spring applied brakes are provided with a manual release feature			
Gear motor brake	3-5521	* All brake types may be employed outdoors			
Brake Selection Questionnaire		* Only one mounting bolt required for assembly			
		* Low response pressure with good reproducibility of braking force at negligible stick-slip			
		* Prepared, dry and lubrication-free compressed air. Brake piston seal groove not grease at assembly			
		* Consult VME Brake Engineering if the rubbing speed exceeds 30 m/sec and at continuous slippage			

1197 / 1299 / Rev. 0409

Rotary



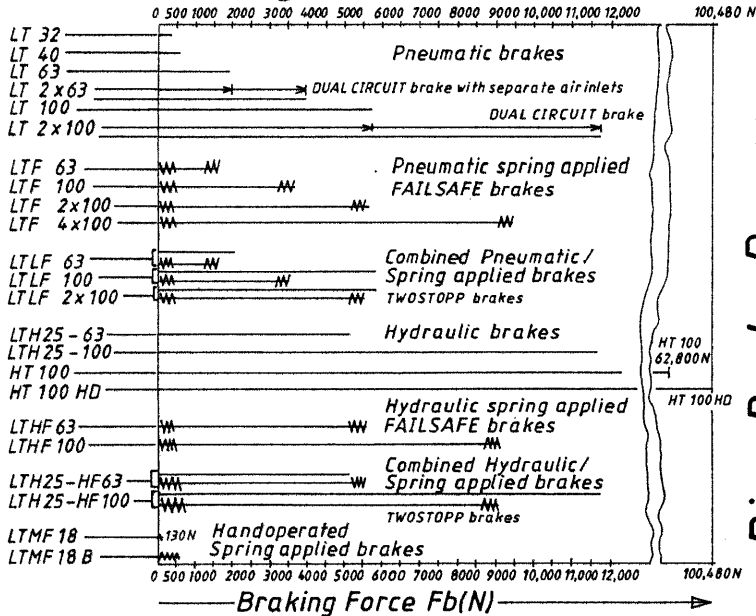
Linear Motion Control



since 1983

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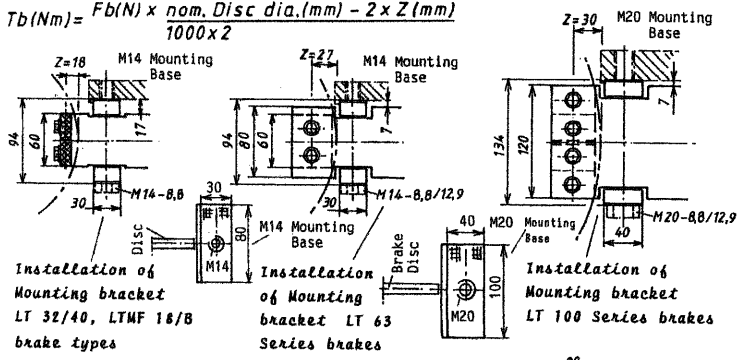
Braking Force Selection Chart



Disc Brake Range

Calculation of Braking Torque $T_b(Nm)$

$$T_b(Nm) = \frac{F_b(N) \times \text{nom. Disc dia. (mm)} - 2 \times Z \text{ (mm)}}{1000 \times 2}$$



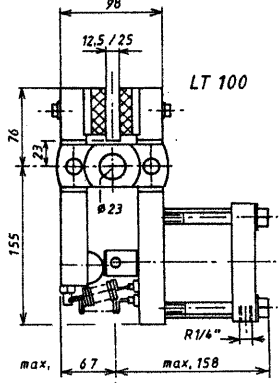
Pneumatic Disc Brake LT 100

EMPLOYMENT: Stopping, Holding, Positioning
Tensioning and Holding Duties
Linear Braking

APPLICATION: Coiling and uncoiling of steel strip. Electric motor drives. Test benches for compliance evaluation of mechanical components. Stopping and holding of industry exhaust fans. Linear braking of rail guided material supply carriages.

BRAKING FORCE: 5.850 (N) - 5 bar
4.100 (N) - 5 bar Low friction linings

INSTALLATION: Data sheet LT100



Pneumatic DUAL CIRCUIT Disc Brake LT 2x63

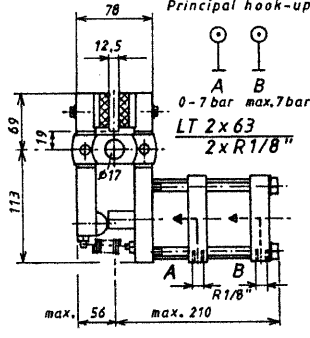
EMPLOYMENT: Combined Continuous Slippage / Emergency Braking

OPERATION: At tensioning duties is the lower brake piston (inlet A) being applied. While the upper brake piston (inlet B) is actuated in case of emergency.

APPLICATION: Coiling and uncoiling of steel strip. Brake test benches

BRAKING FORCE: 1.950 (N) - 5 bar Inlet A
1.950 (N) - 5 bar Inlet B

INSTALLATION: Data sheet LT63 (reference)



Pneumatic Spring Applied FAILSAFE Brake LTF 63

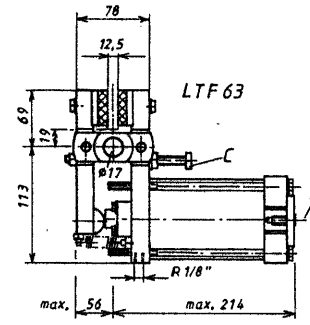
EMPLOYMENT: Emergency Stopping

APPLICATION: Coiler drives
Coil tilting tables

BRAKING FORCE: 1.620 (N) - 0 bar / Release pressure 5.2 bar
1.160 (N) - 0 bar / Release pressure 3.9 bar
810 (N) - 0 bar / Release pressure 3.9 bar
Low friction linings

NOTE: Adjustment-free brake spring
Manual brake release device (C) provided

INSTALLATION: Dwg 1-1109



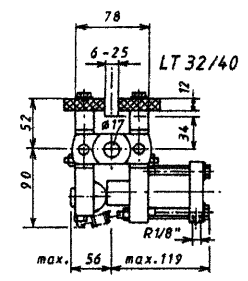
Pneumatic Disc Brake LT 32/40

EMPLOYMENT: Tensioning and Holding Duties

APPLICATION: Coiling and uncoiling of steel strip. Processing of spring wire, speed steel cutting tool wire, resistance wire, razor and saw blade strip.

BRAKING FORCE: 340 / 535 (N) - 5 bar
240 / 375 (N) - 5 bar Low friction linings
170 / 268 (N) - 5 bar Felt linings

INSTALLATION: Dwg 2-1078



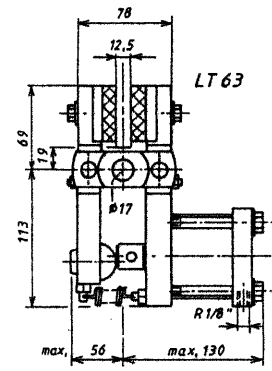
Pneumatic Disc Brake LT 63

EMPLOYMENT: Stopping, Holding, Positioning
Tensioning and Holding Duties
Linear Braking

APPLICATION: Coiling and uncoiling of steel strip. Wire drawing. Cold rolling mills and peripheral equipment. Electric gear motors. Saw mills. Wood working machines. Paper processing. Linear braking of rail born running gears.

BRAKING FORCE: 1.950 (N) - 5 bar
1.365 (N) - 5 bar Low friction linings
975 (N) - 5 bar Felt linings

INSTALLATION: Data sheet LT63



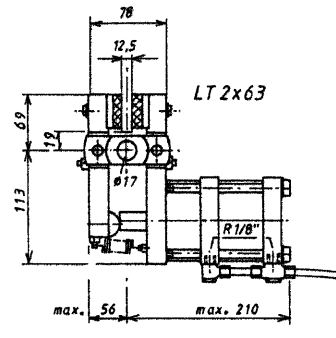
Pneumatic Disc Brake LT 2x63

EMPLOYMENT: Stopping and Holding Duties
Linear Braking

APPLICATION: Circular sawing machines
Saw benches
Wood working machines

BRAKING FORCE: 3.900 (N) - 5 bar

INSTALLATION: Data sheet LT63 (reference)



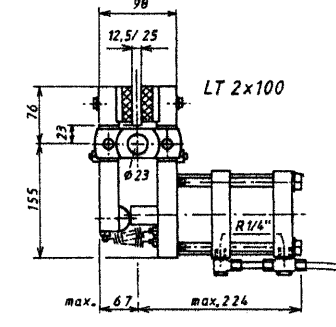
Pneumatic Disc Brake LT 2x100

EMPLOYMENT: Stopping and Holding Duties
Positioning
Linear Braking

APPLICATION: Saw mill log conveyors and feeders. Benches for endurance and performance testing of mechanical components and subassemblies. Electric gear motors and drives.

BRAKING FORCE: 11.700 (N) - 5 bar

INSTALLATION: Data sheet LT2x100



Pneumatic DUAL CIRCUIT Disc Brake LT 2x100

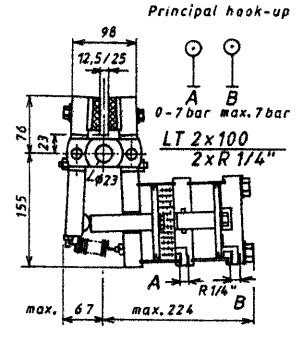
EMPLOYMENT: Combined Continuous Slippage / Emergency Braking

OPERATION: At tensioning duties is the lower brake piston (inlet A) being applied. While the upper brake piston (inlet B) is actuated in case of emergency.

APPLICATION: Coiling and uncoiling of steel strip. Brake test benches

BRAKING FORCE: 5.850 (N) - 5 bar Inlet A
5.850 (N) - 5 bar Inlet B

INSTALLATION: Data sheet LT2x100, Dwg 2-5546



Pneumatic Spring Applied FAILSAFE Brake LTF 100

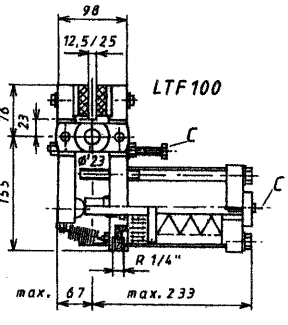
EMPLOYMENT: Emergency Stopping
Repeated Service Braking
Stationary Holding
Linear Braking

APPLICATION: Coiler drives, Peripheral equipment for hot rolling mills. Circular saw for cutting of tubular steel bars. Saw mill frame saw. Unwind stands for rubber fabrics

BRAKING FORCE: 2.830 (N) - 0 bar / Release pressure 3,6 bar

NOTE: Adjustment-free brake spring
Manual brake release device (C) provided

INSTALLATION: Data sheet LTF100



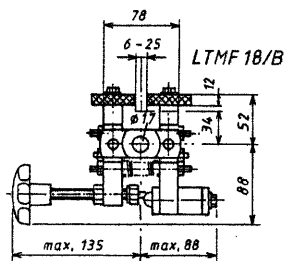
Handoperated Spring Applied Brake LTMF 18/B

EMPLOYMENT: Continuous Slippage
Tensioning Duties

APPLICATION: Coiling and uncoiling of
steel strip.
Processing of spring wire,
speed steel cutting tool wire,
resistance wire, razor and saw
blade strip.
Unwind stands for fiber cable
requiring precise tensioning.

BRAKING FORCE: 0-130 (N) / 0-640 (N)
0- 90 (N) / 0-450 (N) Low friction
linings
0- 65 (N) / 0-320 (N) Felt linings

INSTALLATION: Dwg 2-1037 / 2-1087



Combined Pneumatic/ Spring Applied TWOSTOPP Brake LTLF 63

EMPLOYMENT: Proportioned Braking Action
with FAILSAFE back-up Feature

OPERATION: Inlet B > Service brake
Proportioned braking to air pressure

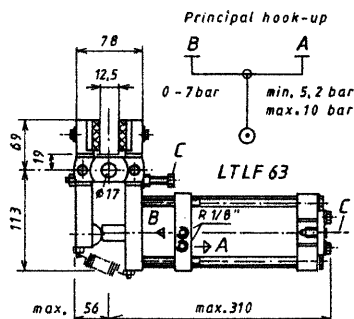
Inlet A > Spring brake
In event of air supply line failure,
power loss, failsafe parking or sta-
tionary holding requirements the spring
actuator applies the brake (Exhaust A)

APPLICATION: Coiler drives. Mobile equipment

BRAKING FORCE: 1.950 (N) - 5 bar > Service brake
1.620 (N) - 0 bar > Spring brake
Release pressure 5.2 bar

NOTE: Adjustment-free brake spring
Manual brake release device (C) provided

INSTALLATION: Dwg 1-1109



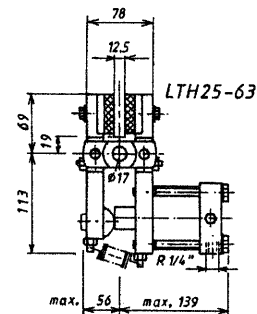
Hydraulic Disc Brake LTH25-63

EMPLOYMENT: Continuous Slippage
Tensioning and Holding Duties
Positioning. Stationary Holding
Linear Braking

APPLICATION: Coiling and uncoiling of steel strip
Motor drives. Electric gear motors
Coil hoisting and tilting tables

BRAKING FORCE: 5.200 (N) - 80 bar
3.640 (N) - 80 bar Low friction
linings

INSTALLATION: Dwg 2-1086



Hydraulic Spring Applied FAILSAFE Brake LTHF 63

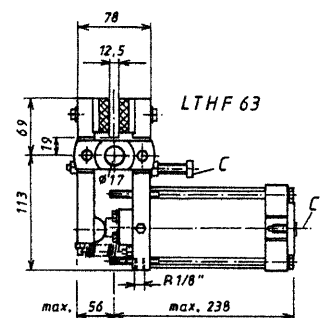
EMPLOYMENT: Emergency Stopping
Positioning. Stationary Holding
Linear Braking

APPLICATION: Electric gear motors
Mobile drilling rigs
Construction machinery

BRAKING FORCE: 5.620 (N) - 0 bar / Release
pressure 19,5 bar
2.640 (N) - 0 bar / Release
1.850 (N) - 0 bar / pressure 9,5 bar
Low friction linings

NOTE: Adjustment-free brake spring
Manual brake release device (C) provided

INSTALLATION: Dwg 1-1109



Combined Hydraulic/ Spring Applied TWOSTOPP Brake LTH25-HF 63

EMPLOYMENT: Proportioned Braking Action
with FAILSAFE back-up Feature

OPERATION: Inlet B > Service brake
Proportioned braking to
hydraulic input pressure

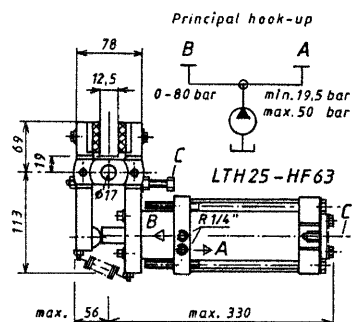
Inlet A > Spring brake
In event of hydraulic line
failure, power loss, failsafe
parking or stationary holding
requirements the spring actuator
applies the brake
(Exhaust at A).

APPLICATION: Mobile and stationary equip-
ment requiring proportioned
braking action backed-up by
failsafe parking or holding
duties, e.g. Coiler drives,
Fork lift trucks. Construction Machinery

BRAKING FORCE: 5.200 (N) - 80 bar > Service brake
5.620 (N) - 0 bar > Spring brake
Release pressure 19,5 bar

NOTE: Adjustment-free brake spring
Manual brake release device (C) provided

INSTALLATION: Dwg 1-1109



Pneumatic Spring Applied FAILSAFE Brake LTF 2x100/4x100

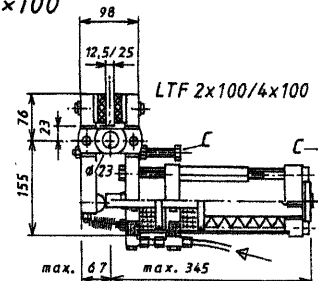
EMPLOYMENT: Emergency Stopping
Stationary Holding
Linear Braking

APPLICATION: Coiler drives. Peripheral equipment
for hot rolling mills, iron and
aluminum works.
Conveying equipment

BRAKING FORCE: 5.590 (N) - 0 bar / Release
pressure 3,1 bar
9.460 (N) - 0 bar / Release
pressure 5,1 bar

NOTE: Adjustment-free brake spring
Manual brake release device (C) provided

INSTALLATION: Data sheet LTF2x100/LTF4x100



Combined Pneumatic/ Spring Applied TWOSTOPP Brake LTLF 100/2x100

EMPLOYMENT: Proportioned Braking Action
with FAILSAFE back-up Feature

OPERATION: Inlet B > Service brake
Proportioned braking to air pressure

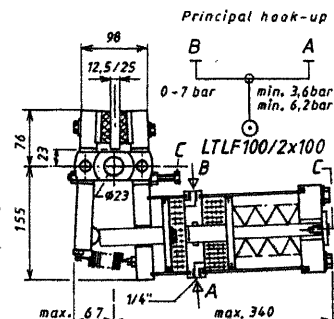
Inlet A > Spring brake
In event of air supply line failure,
power loss, failsafe parking or sta-
tionary holding requirements the spring
actuator applies the brake (Exhaust A)

APPLICATION: Cable winders. Power generator units

BRAKING FORCE: 5.850 (N) - 5 bar > Service brake
3.620 (N) - 0 bar > Spring brake
Release pressure 3,6 bar
5.590 (N) - 0 bar > Spring brake
Release pressure 6.2 bar

NOTE: Adjustment-free brake spring
Manual brake release device (C) provided

INSTALLATION: Data sheet 2-5545



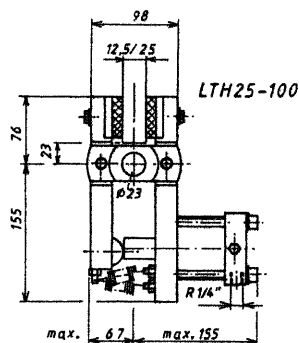
Hydraulic Disc Brake LTH 25-100

EMPLOYMENT: Continuous Slippage
Tensioning and Holding Duties
Positioning. Stationary Holding
Linear Braking

APPLICATION: Coiling and uncoiling of steel strip
Motor Drives. Electric gear motors
Coil hoisting and tilting tables

BRAKING FORCE: 11.680 (N) - 160 bar
8.200 (N) - 160 bar Low friction
linings

INSTALLATION: Dwg 2-1087



Hydraulic Spring Applied FAILSAFE Brake LTHF 100

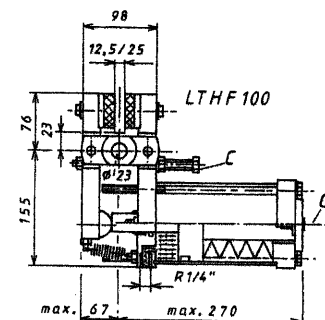
EMPLOYMENT: Emergency Stopping
Repeated Service Braking
Parking. Stationary Holding
Continuous Slippage and Holding
Linear Braking

APPLICATION: Transmission brake for forestry
tractors, logging equipment
Marine cables winches for pay
off and holding duties

BRAKING FORCE: 9.180 (N) - 0 bar / Release
pressure 10,5 bar

NOTE: Adjustment-free brake spring
Manual brake release device (C) provided

INSTALLATION: Data sheet LTHF100



Combined Hydraulic/ Spring Applied TWOSTOPP Brake LTH 25-HF 100

EMPLOYMENT: Proportioned Braking Action
with FAILSAFE back-up Feature

OPERATION: Inlet B > Service brake
Proportioned braking to
hydraulic input pressure

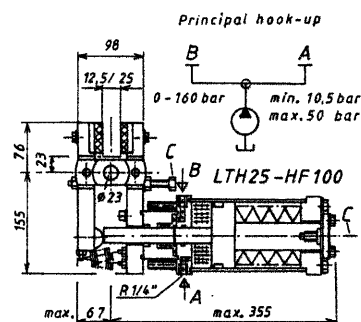
Inlet A > Spring brake
In event of hydraulic line
failure, power loss, failsafe
parking or stationary holding
requirements the spring actuator
applies the brake
(Exhaust at A).

APPLICATION: Mobile and stationary equip-
ment requiring proportioned
braking action backed-up by
failsafe parking or holding
duties, e.g. Coiler Drives,
Logging and Construction Equipment

BRAKING FORCE: 11.680 (N) - 160 bar > Service brake
9.180 (N) - 0 bar > Spring brake
Release pressure 10,5 bar

NOTE: Adjustment-free brake spring
Manual brake release device (C) provided

INSTALLATION: Dwg 1-1093



Hydraulic Disc Brake HT 100/HD

EMPLOYMENT: Service Braking, Stalling
Stationary Holding

APPLICATION: Test benches for torque and power
performance evaluation of transmissions

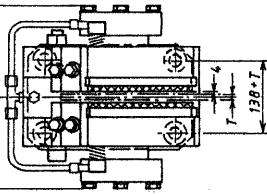
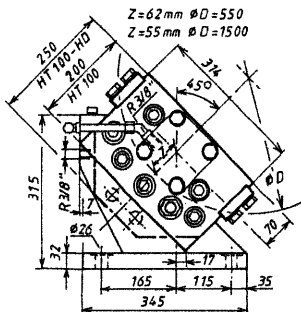
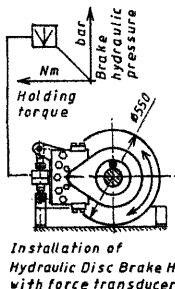
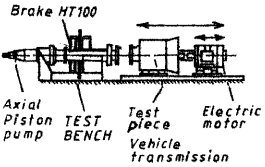
BRAKING FORCE: 62,800 (N) - 100 bar HT100
100,480 (N) - 160 bar HT100/HD

INSTALLATION: Data sheet 2-5471
Dwg 3-5555 Mounting of HT100 Caliper
Dwg 3-5556 Mounting of HT100/HD Halves
separately

OPERATIONAL DATA

Max. disc speed 4500 rpm
Slipping torque 200-450 Nm
at speed range 3000-1200 rpm
maintained by adjustable
hydraulic piston pump.

Stalling torque of 10,000 Nm
by Hydraulic Disc Brake HT100
at 100 bar pressure



Hydraulic Disc Brake HT100
with mounting bracket
acc. to Data Sheet 2-5471

Pneumatic TWOSTOPP Braking System LTLF100

EMPLOYMENT
Proportional Braking Action
with FAILSAFE back-up

APPLICATION
Service brake being applied
within speed range 400-0 rpm
to reduce run-down time in
order to minimize boundary
(dry) bearing friction.

OPERATIONAL DATA
Extended caliper width combined
service and spring brake applied
to generator set flywheel.
Proportioned braking to input
pressure > Inlet B

In event of power loss, air supply
line failure or failsafe stationary
holding requirements the spring
actuator applies the brake > Exhaust A.

BRAKING FORCE

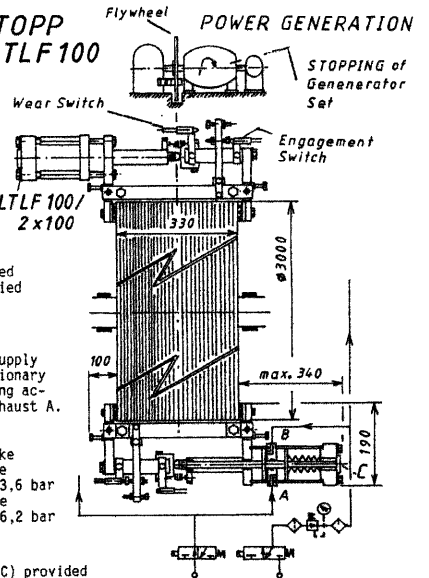
5.850 (N) - 5 bar Service brake
3.620 (N) - 0 bar Spring brake
Release pressure 3,6 bar
5.590 (N) - 0 bar Spring brake
Release pressure 6,2 bar

NOTE

Adjustment-free brake spring
Manual brake release device (C) provided

ACCESSORIES

Engage/Disengage switches
Lining wear monitoring switches



Special Design LTLF100/2x100
Combined Pneumatic /
Spring Applied TWOSTOPP Brake

Transmission Test Bench

Transmission Brake

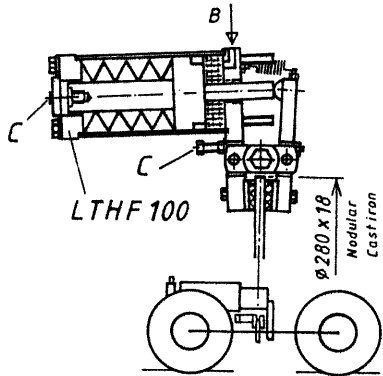
EMPLOYMENT
Service and Emergent Braking
Parking, Stationary Holding

OPERATIONAL DATA
Braking torque 1010 Nm at 0 bar hydraulic
pressure. Nom. release pressure 10,5 bar
Max. operating pressure 50 bar (inlet B)
Disc Ø 280 mm, max. speed 2600 rpm

APPLICATION
Auxiliary transmission shaft mounted brake
for forestry tractors, logging equipment,
fork lift trucks, construction machinery.

NOTE

Adjustment-free brake spring
Manual brake release device (C) provided



Hydraulic Spring Applied
FAILSAFE Brake LTHF 100

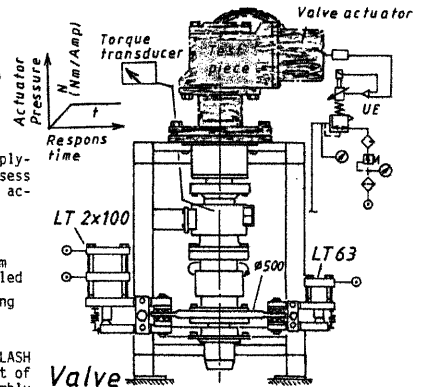
Pneumatic Multiple Disc Brake Braking System

EMPLOYMENT
By gradually and separately applying
pneumatic disc brakes to assess valve
actuator response time and actuating
pressure.

OPERATIONAL DATA
Braking torque range 0-8000 Nm
Disc Ø 500 mm, speed 220-250 rpm
3 off LT2x100 air brakes installed

CLOSED LOOP control incorporating
proportional valve operating at
0,5-6 bar, 24 V, I max. 2,2 A

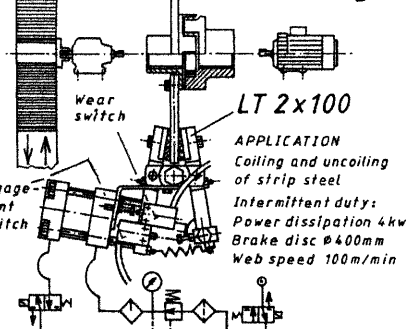
To minimize valve actuator BACKLASH
during braking test a low moment of
inertia transducer spindle assembly
incorporating stationary brakes is
provided.



Valve Actuator
Test Bench

APPLICATION:
Nuclear Power Stations
Reliability and Performance
Evaluation

Strip Steel Processing



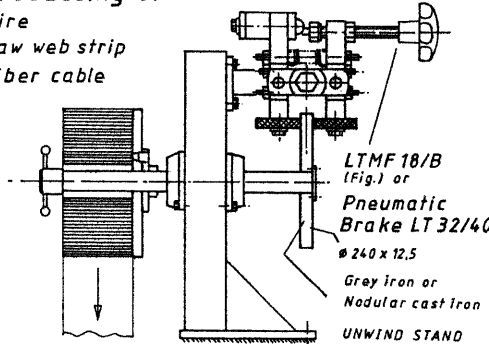
Dual Circuit Coiler Brake

Combined continuous slippage with emergency
stopping capability by applying upper brake
piston operated through a separate air supply
line.

ACCESSORIES: Engage/Disengagement switches
Lining wear monitoring switches

Processing of Wire

Saw web strip
Fiber cable

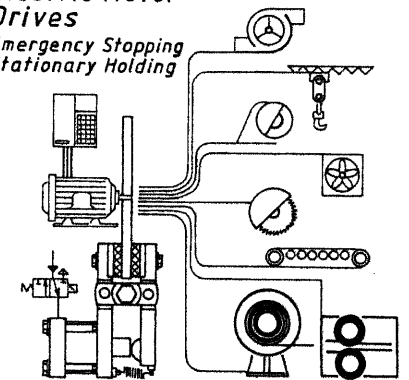


Coiling and uncoiling of drilling tool wire, max. wire dia. 5 mm
Saw blade strips, min. cross section 1x1 mm
Max. continuous feeding speed 15 m/min

Proportioned braking with capability gradually adjusting to ZERO
braking torque for materials requiring precise tension control
during the winding process, e.g. fiber cables.

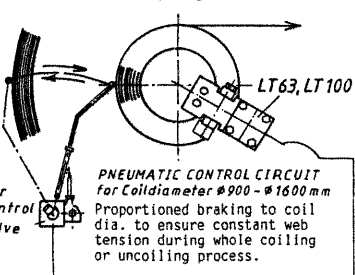
The brake is either furnished with friction material or felt linings.

Electric Motor Drives Emergency Stopping Stationary Holding



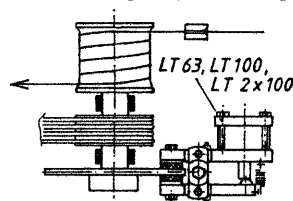
LT 63 or LT 100 series pneumatic,
hydraulic, spring applied disc brakes

Tension Control Continuous Slippage



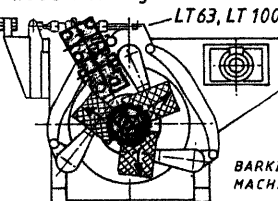
APPLICATION: Processing of paper, plastic foils,
woven fabrics, spring wire

Wire Drawing Cable Making, Rope Braiding



To counterbalance unequally distributed
annual coil weights, varying feeding
speeds, changing material properties
apply pneumatic disc brake.

Saw Mills Wood Working Machines



Braking, Emergency Stopping and Holding
Duties on BARKING MACHINES, WOOD CHIPPERS,
CIRCULAR SAWS, LOG CONVEYORS

Installation and
Application Examples of:

Pneumatic
Hydraulic
Spring Applied
Hand Operated
Caliper Disc Brakes
as well as manufactured
Brake Test Benches

Rotary

Linear Motion Control

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